

**SUBSTRATE LAYER CUTTING DEVICE AND METHOD****ABSTRACT**

5           An automatic high-precision layer cutting device for separating a layer from a semiconductor substrate. The cutting device includes a fixed positioning member for receiving at least a portion of a semiconductor substrate that has a weakened area therein and a peripheral annular notch that is located below the weakened area. The positioning member maintains a predetermined position of the substrate on a support. The device  
10   also includes cutting means having at least one blade for contacting the substrate and for inducing a cleaving wave into the substrate. The cutting means is operatively associated with the positioning member so that the at least one blade contacts the annular notch and the positioning member prevents movement of the substrate. The at least one blade induces a cleaving wave of sufficient intensity to both divide the substrate at the notch  
15   into first and second parts and detach the layer from the substrate along the weakened area.

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